

FIG. 1

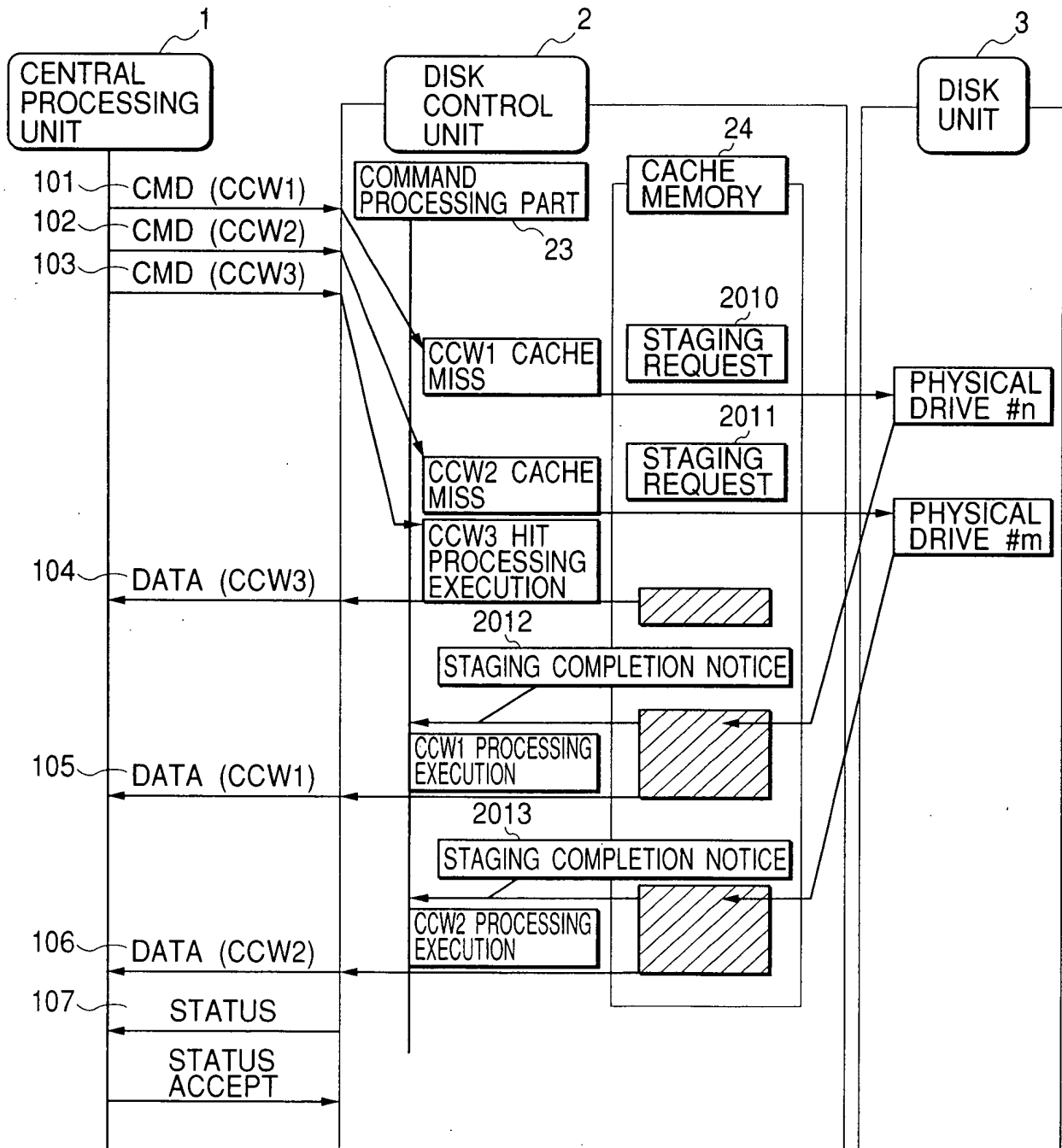


FIG. 2

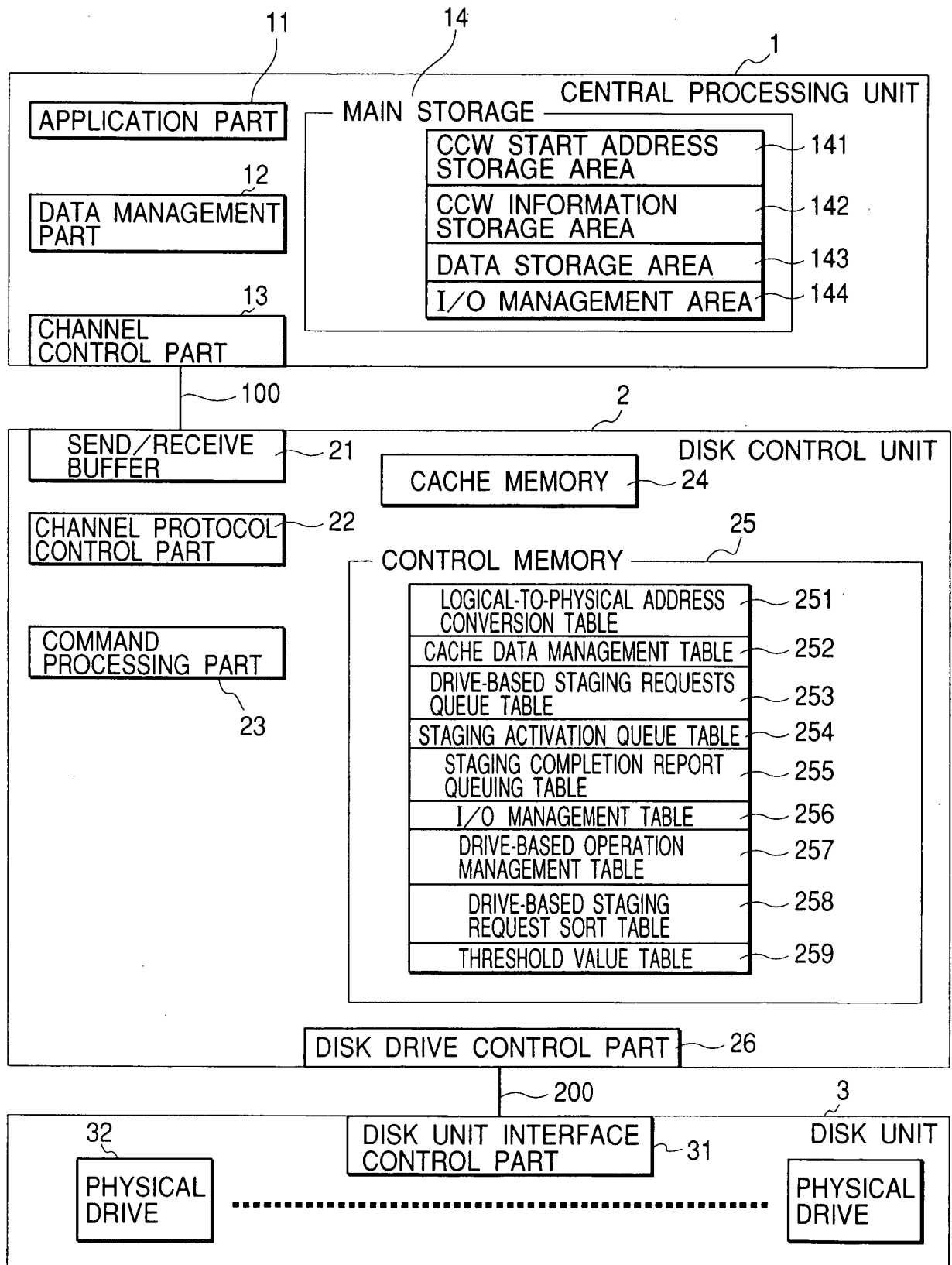
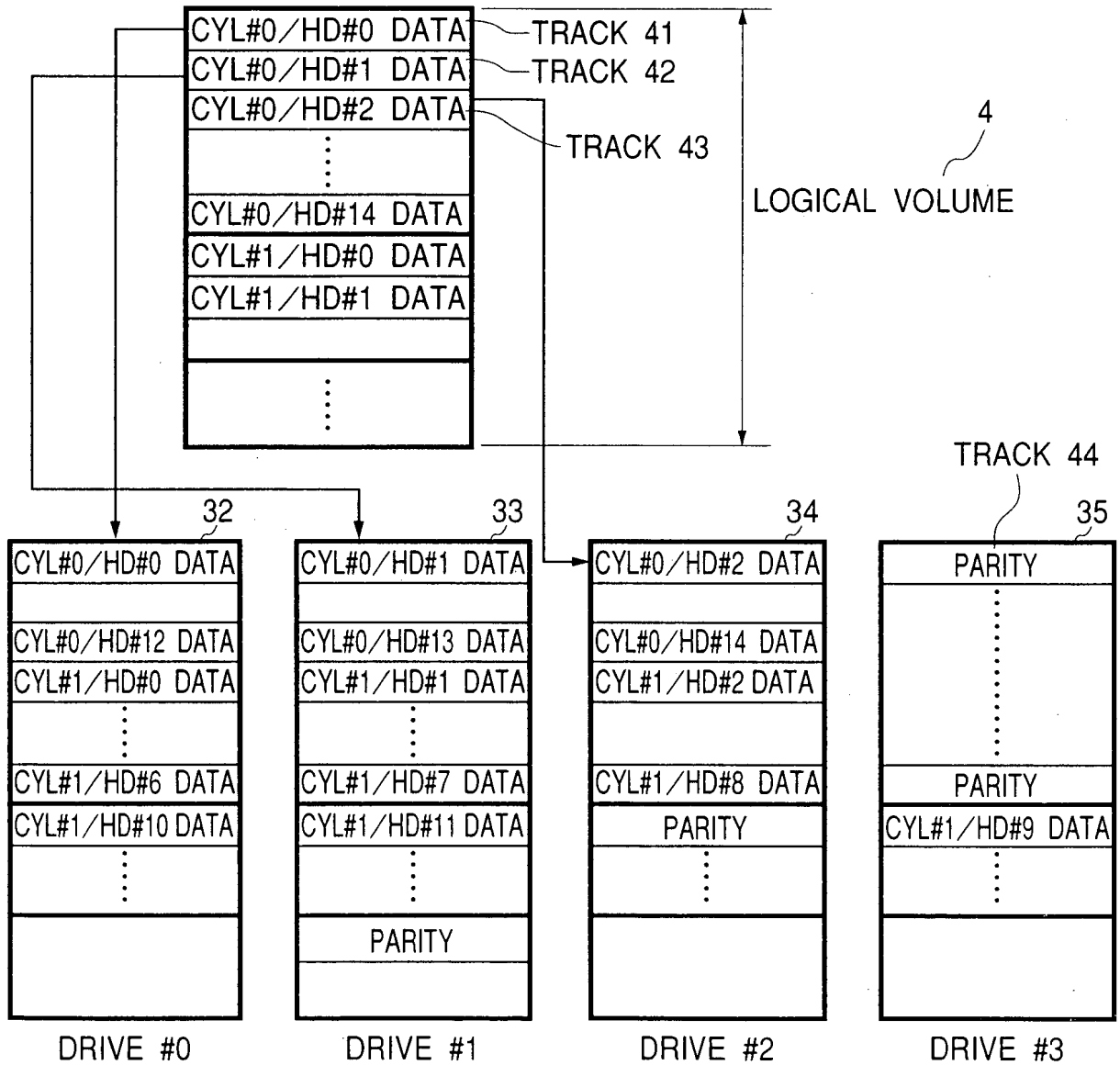
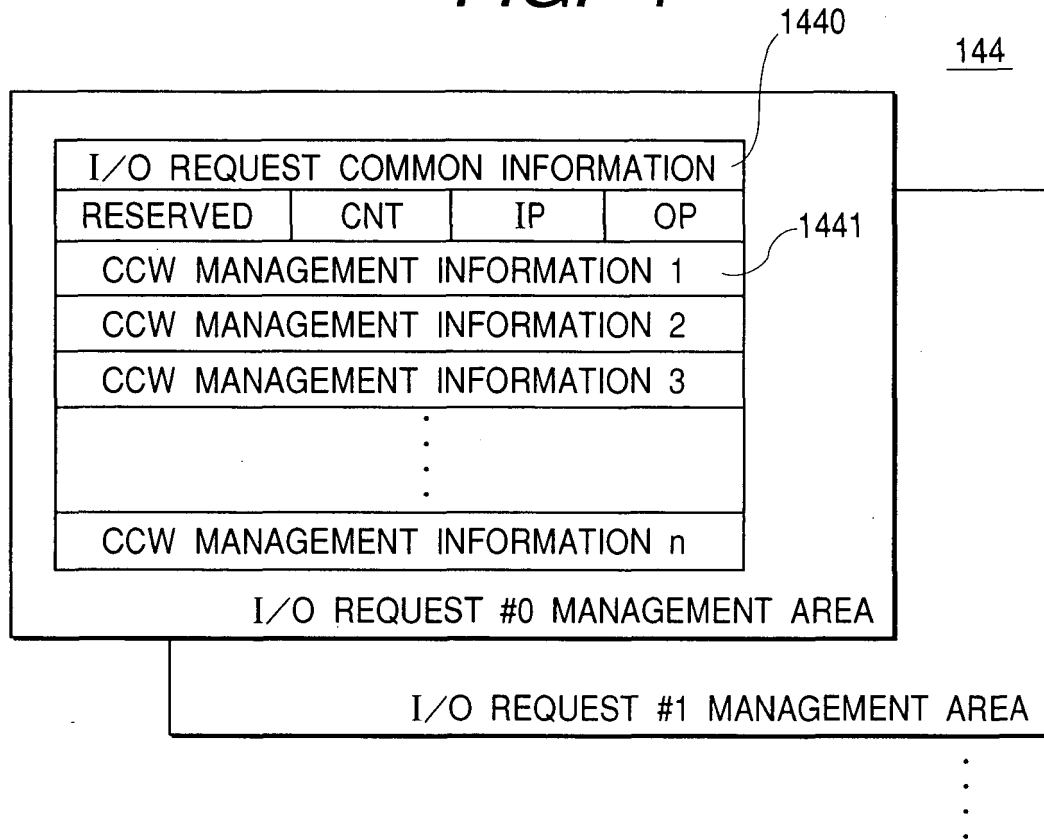


FIG. 3



**FIG. 4**

CNT : NUMBER OF ENTERED ITEMS OF CCW  
MANAGEMENT INFORMATION

IP : INDICATES THE AREA OF CCW MANAGEMENT  
INFORMATION ENTERED MOST RECENTLY

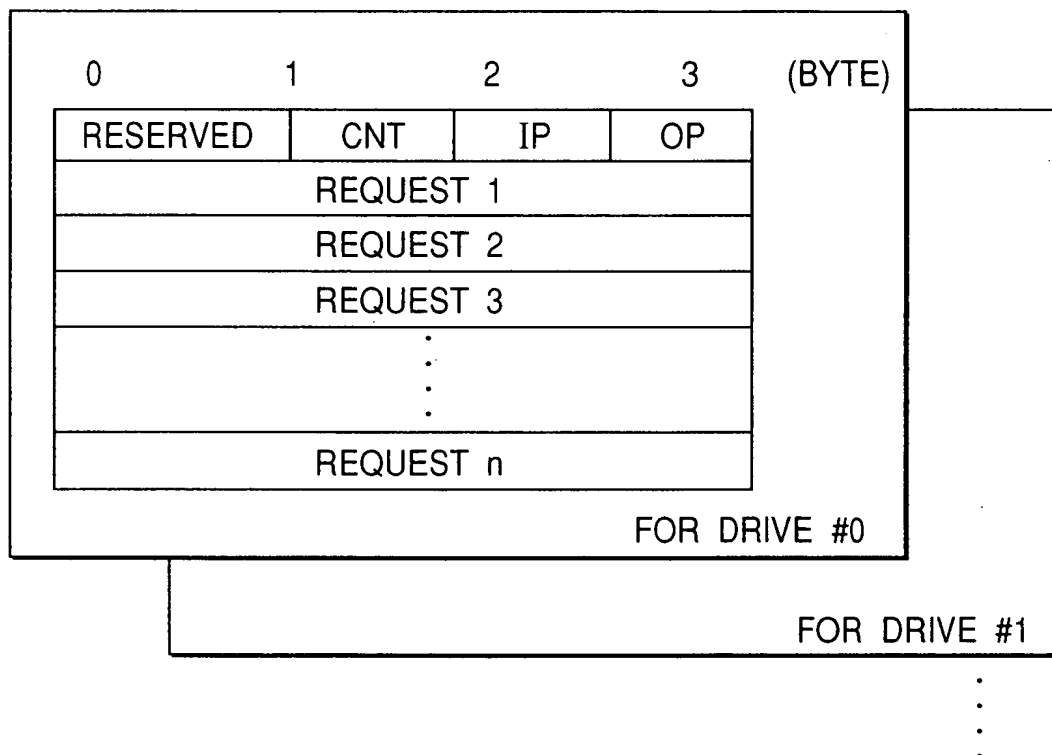
OP : INDICATES THE AREA OF CCW MANAGEMENT  
INFORMATION ENTERED EARLIEST

I/O REQUEST COMMON INFORMATION : I/O PROCESSING STATUS  
INFORMATION

I/O STATUS INFORMATION : STATUS RECEIVE STATUS OF ALL CCWs  
(INDICATES WHETHER ALL STATUSES  
WERE RECEIVED OR NOT)

CCW MANAGEMENT INFORMATION : CCW #, COMMAND CODE, CCW STATUS  
INFORMATION, STAGING REQUEST ID #,  
DATA STORAGE DESTINATION MAIN  
STORAGE ADDRESS

CW STATUS INFORMATION : CCW IN PROCESS, STATUS RECEIVE WAIT

**FIG. 5**253**DRIVE-BASED STAGING REQUEST QUEUE TABLE**

CNT : NUMBER OF ENTERED REQUESTS

IP : INDICATES THE AREA OF A REQUEST ENTERED MOST RECENTLY

OP : INDICATES THE AREA OF A REQUEST ENTERED EARLIEST

REQUEST CONTENTS : REQUEST ID (I/O REQUEST #), CCW #, TRANSFER  
START LBA #, TRANSFER END LBA #, NUMBER OF  
TRANSFERRED BYTES, NEX POINTER

**FIG. 6**254

STAGING ACTIVATION QUEUE TABLE

0	1	2	3	(BYTE)
RESERVED	CNT	IP	OP	
REQUEST 1				
REQUEST 2				
REQUEST 3				
⋮				
REQUEST n				

CNT : NUMBER OF ENTERED REQUESTS

IP : INDICATES THE AREA OF A REQUEST ENTERED MOST RECENTLY

OP : INDICATES THE AREA OF A REQUEST ENTERED EARLIEST

REQUEST CONTENTS : DRIVE #, REQUEST ID #

**FIG. 7**255

STAGING COMPLETION REPORT QUEUING TABLE

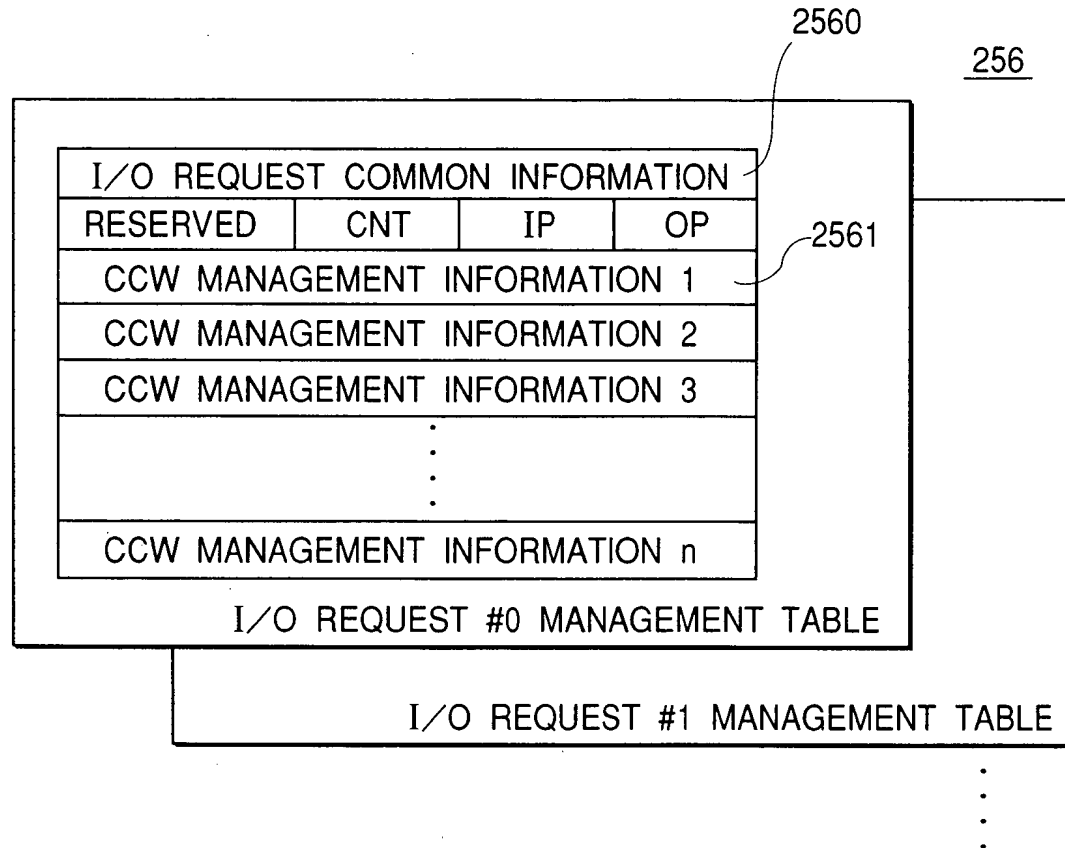
0	1	2	3	(BYTE)
RESERVED	CNT	IP	OP	
COMPLETION REPORT 1				
COMPLETION REPORT 2				
COMPLETION REPORT 3				
⋮				
COMPLETION REPORT n				

CNT : NUMBER OF ENTERED COMPLETION REPORTS

IP : INDICATES THE AREA OF A COMPLETION REPORT MOST RECENTLY

OP : INDICATES THE AREA OF A COMPLETION REPORT ENTERED EARLIEST

REQUEST CONTENTS : DRIVE #, REQUEST ID #, END STATUS

**FIG. 8**

CNT : NUMBER OF ENTERED ITEMS OF CCW  
MANAGEMENT INFORMATION

IP : INDICATES THE AREA OF CCW MANAGEMENT  
INFORMATION ENTERED MOST RECENTLY

OP : INDICATES THE AREA OF CCW MANAGEMENT  
INFORMATION ENTERED EARLIEST

I/O REQUEST COMMON INFORMATION : I/O REQUEST #

CCW MANAGEMENT INFORMATION : CCW #, COMMAND CODE, CCW  
STATUS INFORMATION, STAGING  
REQUEST ID #,

CCW STATUS INFORMATION : CCW IN PROCESS, STATUS  
STAGING COMPLETION WAIT

**FIG. 9**257

DRIVE-BASED OPERATION MANAGEMENT TABLE				
	0	1	2	3 (BYTE)
	RESERVED		CURRENT AREA	
	AREA #0		AREA #1	
DRIVE #0	ACCESS COUNT 1		ACCESS COUNT 2	
DRIVE #1	ACCESS COUNT 1		ACCESS COUNT 2	
DRIVE #2	ACCESS COUNT 1		ACCESS COUNT 2	
⋮	⋮		⋮	
DRIVE #n	ACCESS COUNT 1		ACCESS COUNT 2	

**FIG. 10**258

DRIVE-BASED STAGING REQUEST SORT TABLE				
	0	1	2	3 (BYTE)
	RESERVED	MRU	LRU	CNT
	ENTRY 1			
	ENTRY 2			
	⋮			
	ENTRY n			
	DRIVE #0			
	DRIVE #1			

MUR: INDICATES THE AREA OF THE NEWEST ENTRY

LRU: INDICATES THE AREA OF THE OLDEST ENTRY

CNT: NUMBER OF ENTRIES

REQUEST CONTENTS: REQUEST ID # / (I/O REQUEST #), CCW #,  
TRANSFER START LBA #, TRANSFER END LBA #,  
NUMBER OF TRANSFERRED BYTES



**FIG. 11**259

THRESHOLD VALUE TABLE				
0	1	2	3	(BYTE)
THRESHOLD VALUE OF THE NUMBER OF STAGING TARGET COMMANDS				2590
THRESHOLD VALUE OF COLLECTIVE STAGING LBA COUNT				2591
THRESHOLD VALUE OF THE NUMBER OF RECEIVED CCWs				2592

FIG. 12

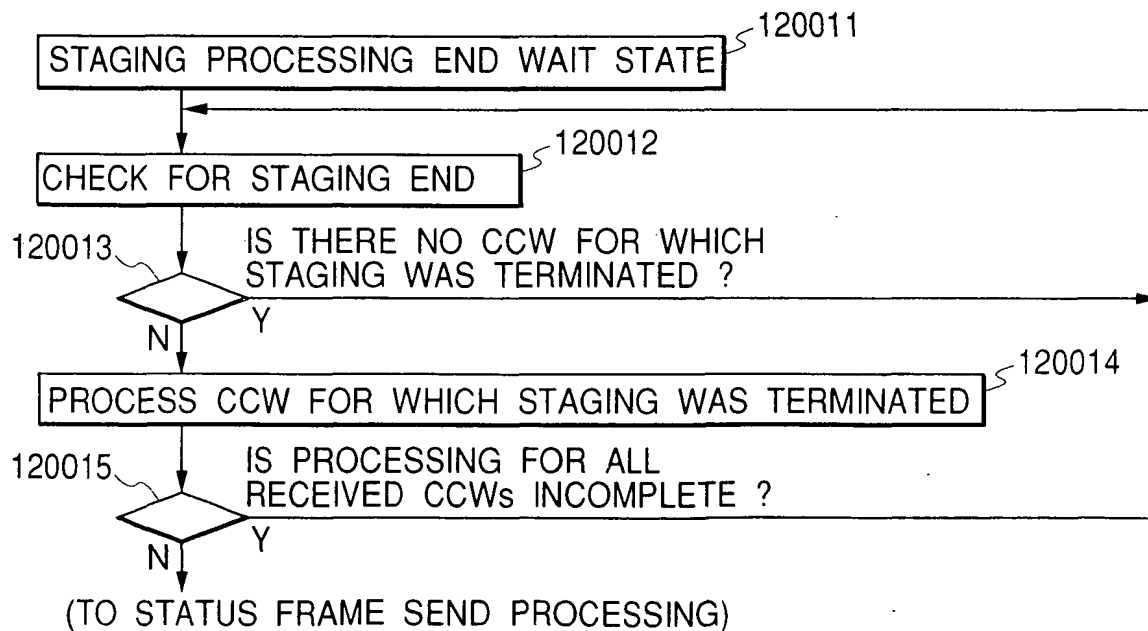
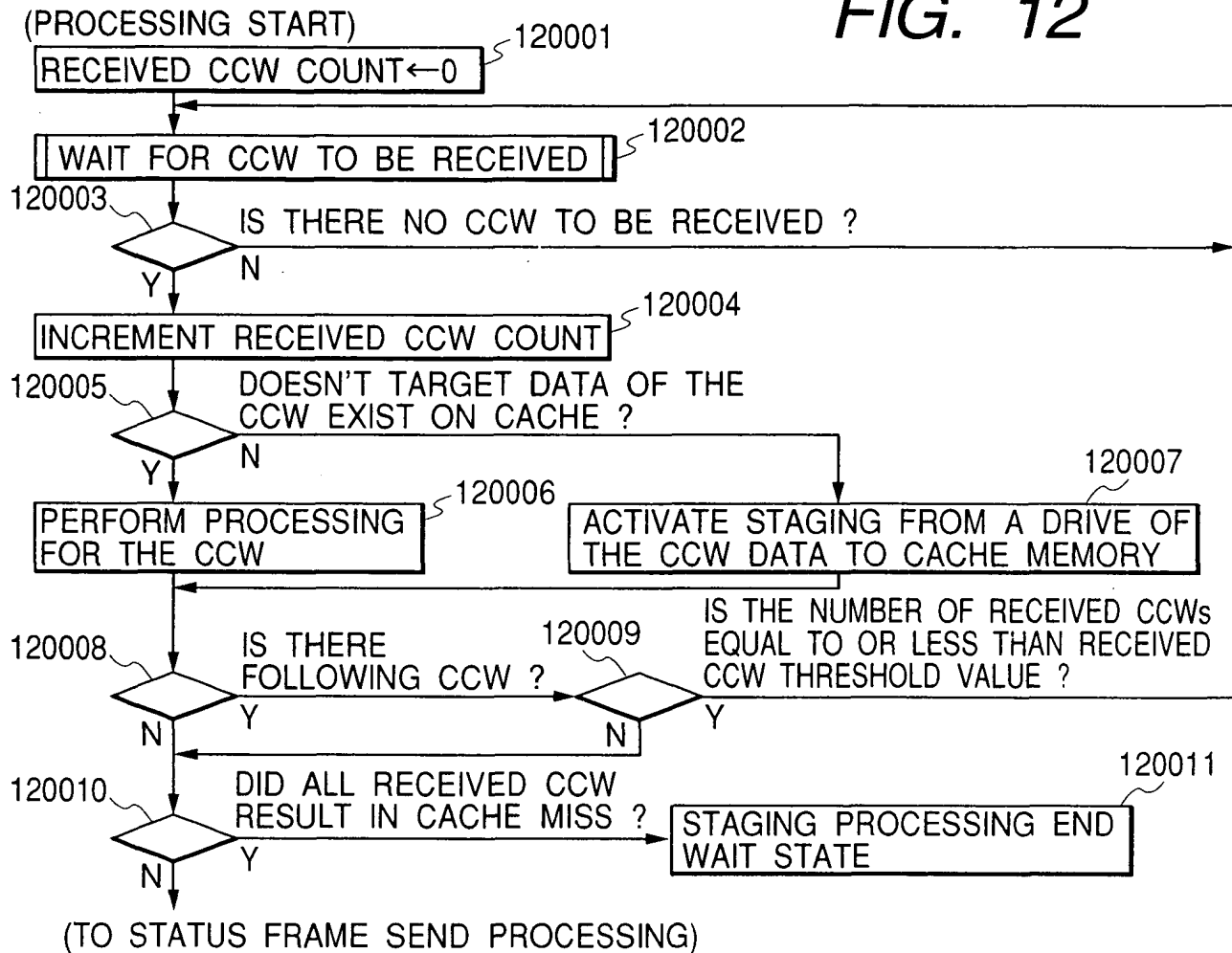
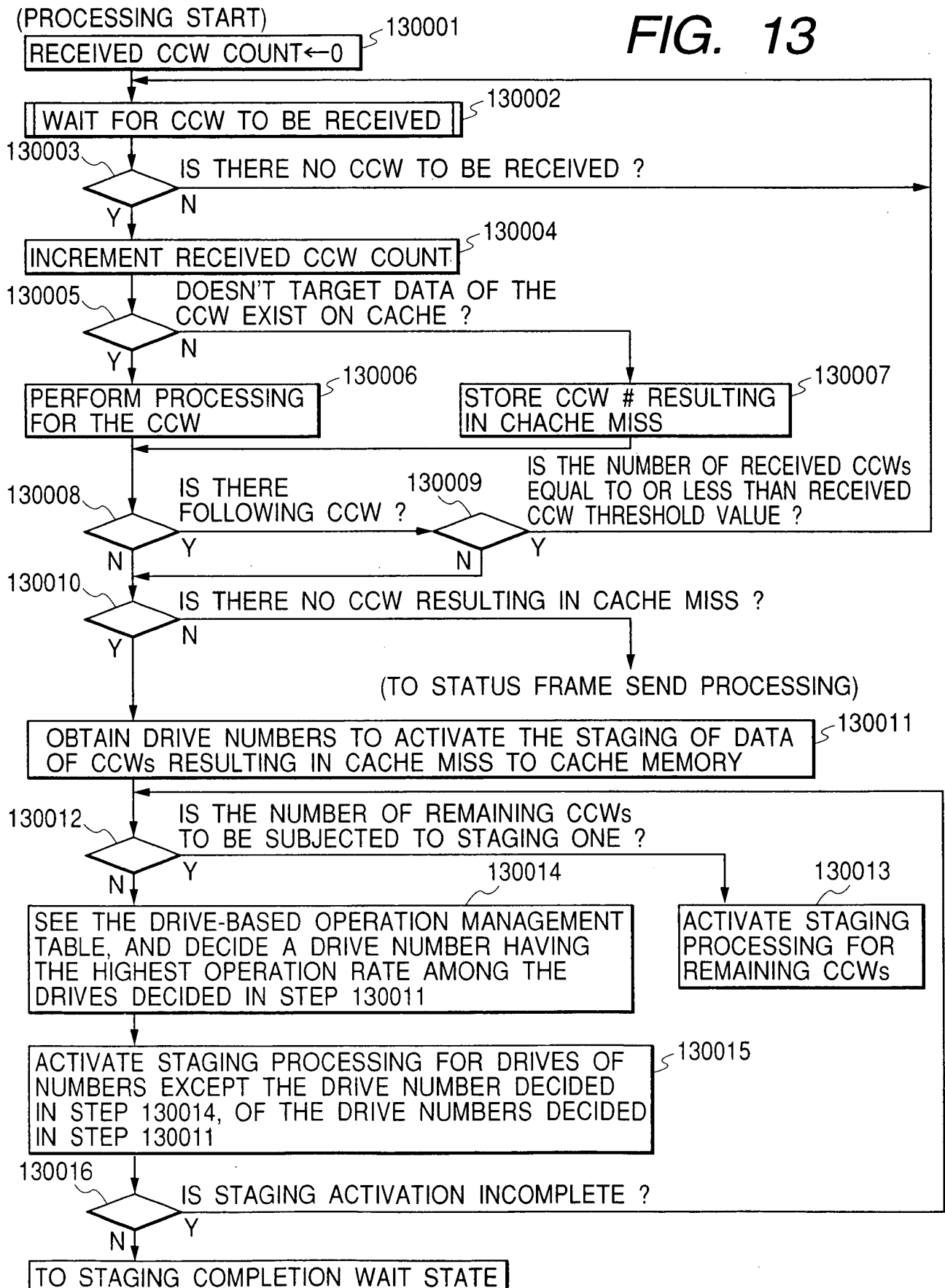
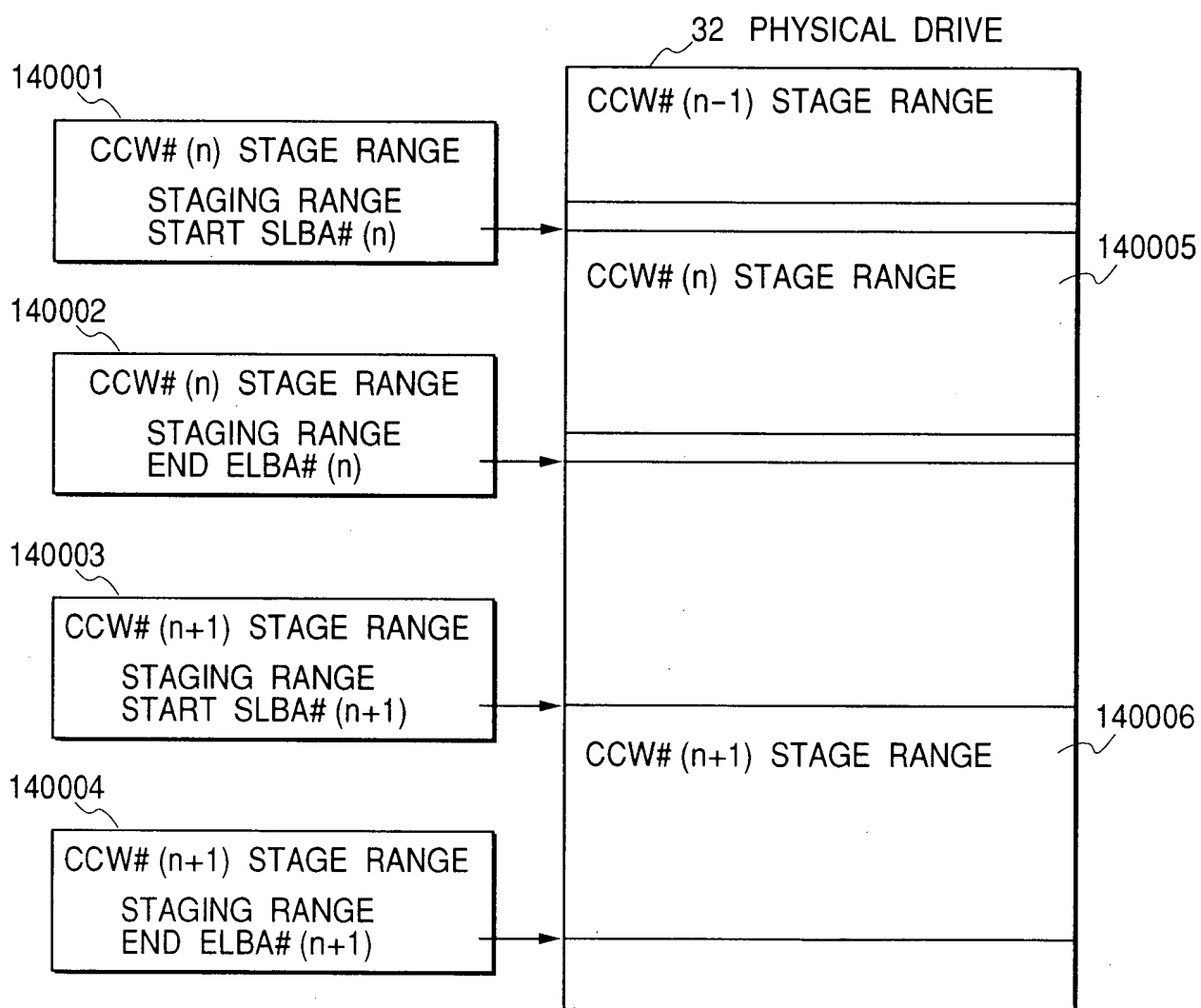


FIG. 13





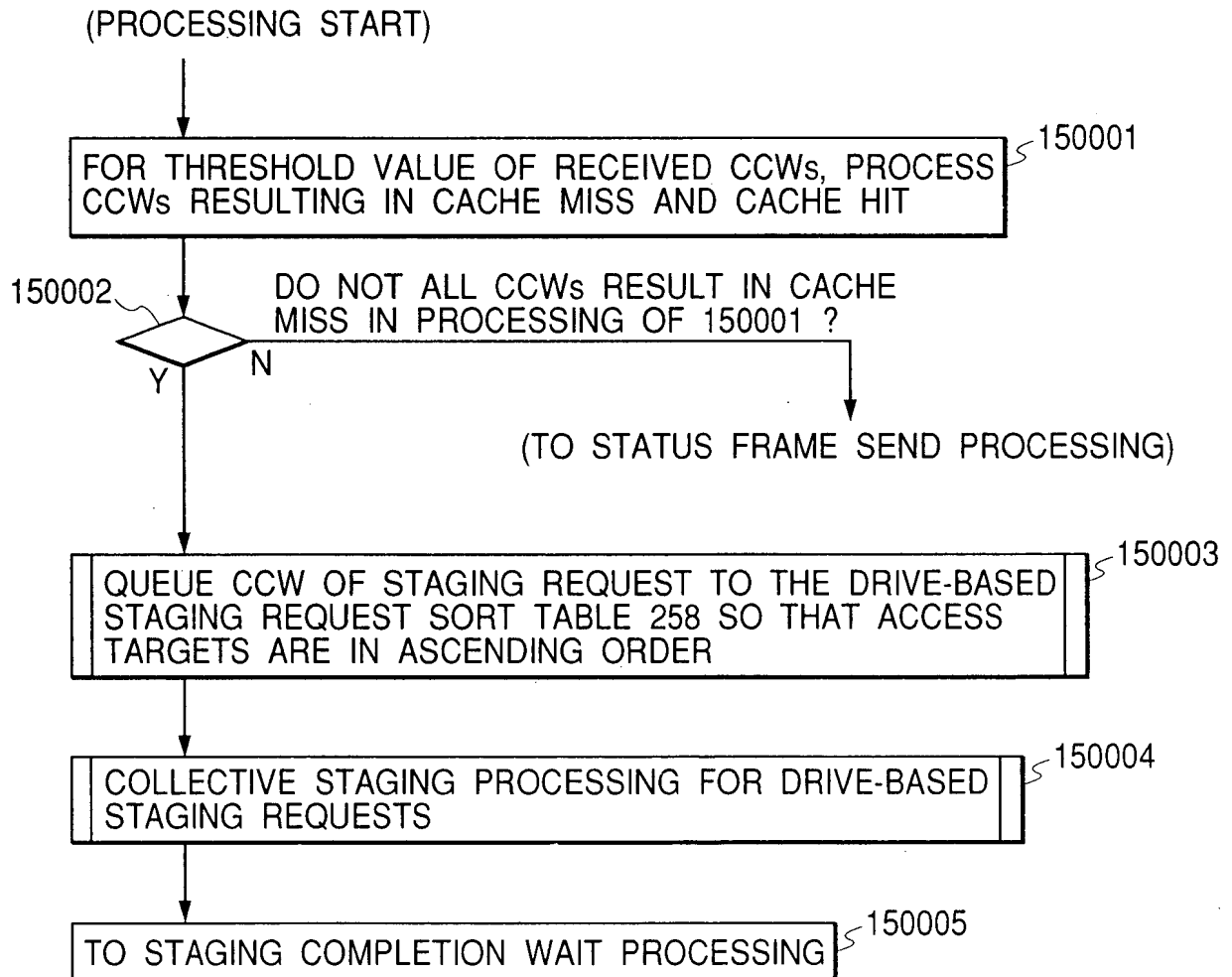
*FIG. 15*

FIG. 16

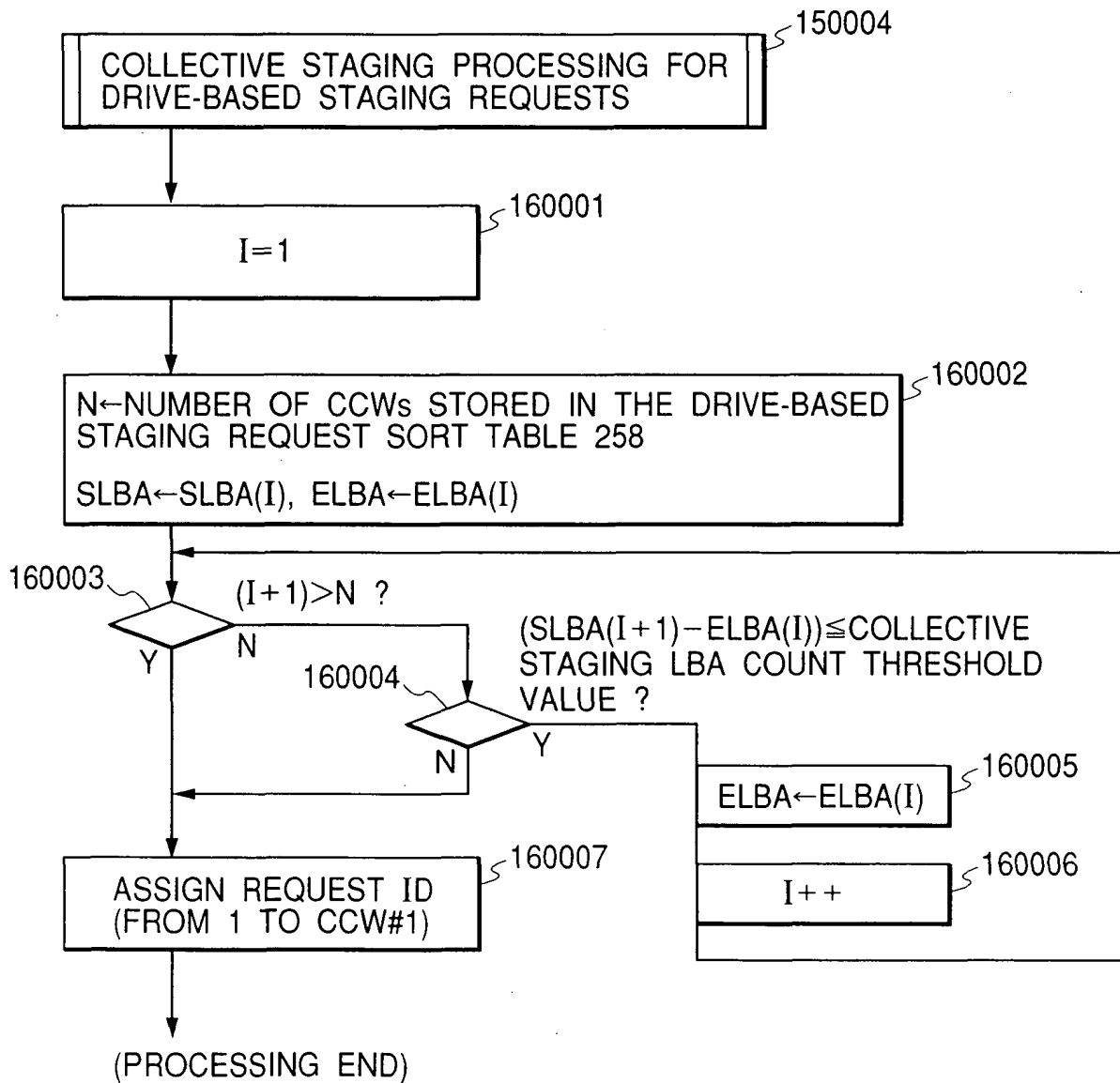
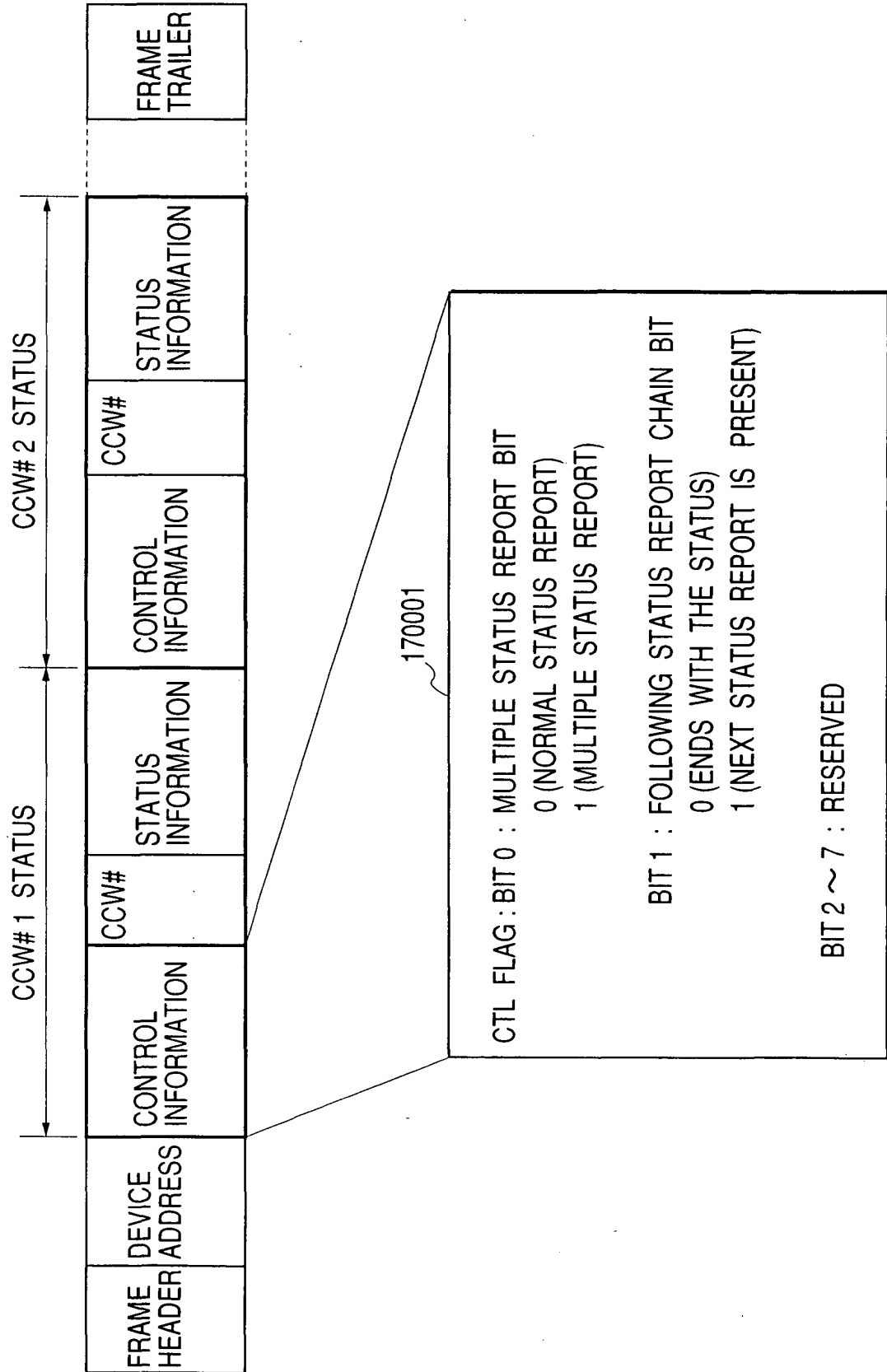
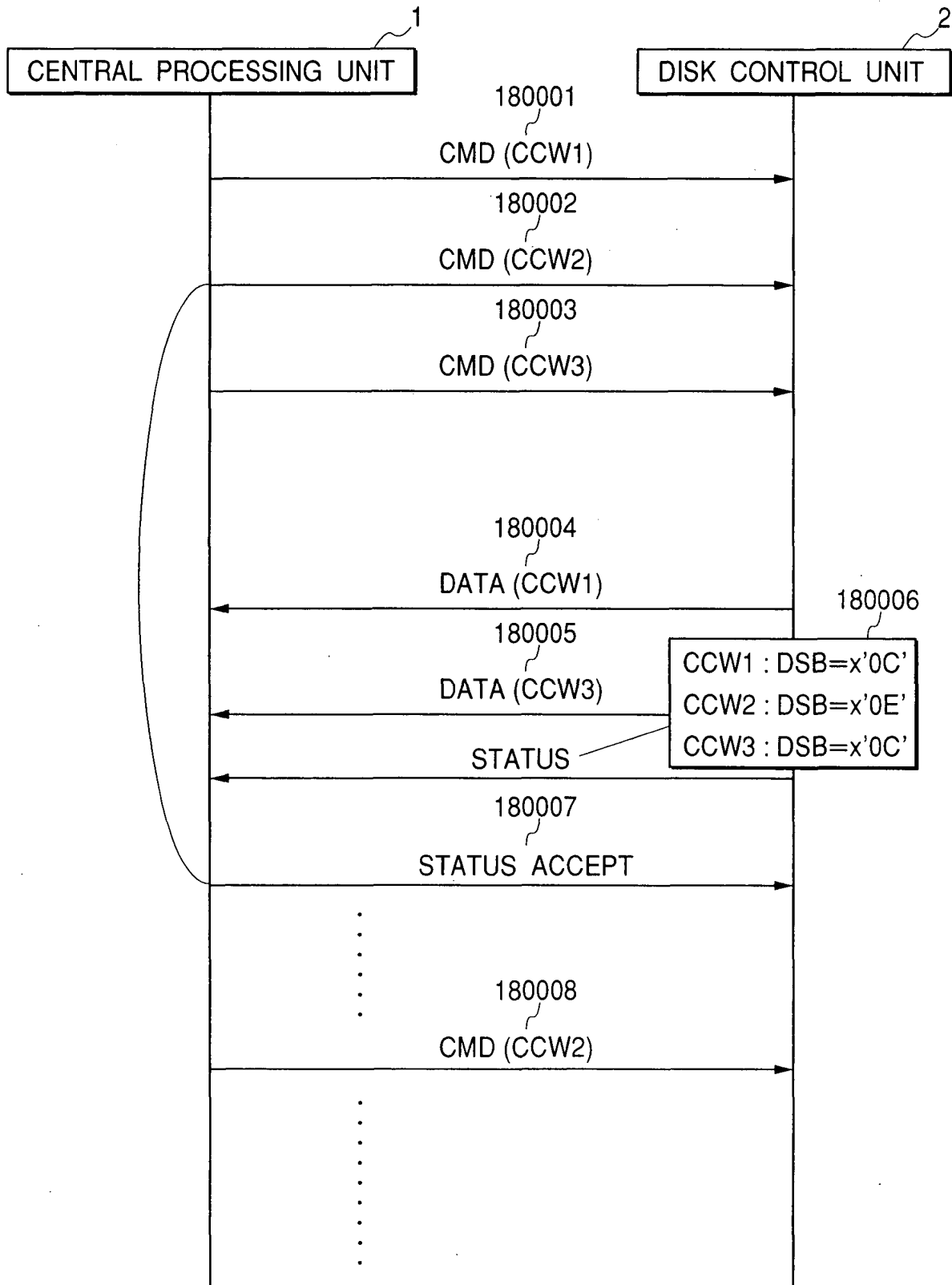


FIG. 17



**FIG. 18**



**FIG. 19**